# Fuel cells sell AI data centers time, and US buyers are signing up.

A large new data center in the United States can wait three to six years for a grid connection. A modular fuel-cell plant can be running within about two years, and on Rystad Energy's figures data centers have already contracted roughly five years of the industry's factory output. Korea has no buying route sized for data centers yet.

## 3–6 years

Wait for a US grid connection for a large new load, Rystad Energy (2026)

## 9 GW

Fuel cells contracted for data centers, frameworks included, against about 1.8 GW a year of factory output (Rystad Energy)

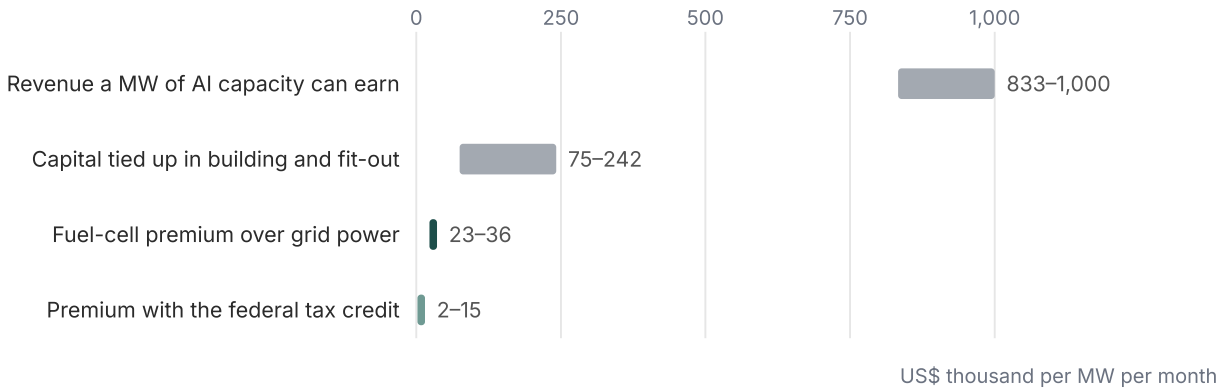
## 2–4%

A month's fuel-cell premium per MW, before the tax credit, as a share of what a MW of AI capacity earns in a month (NRG calculation)

SUMMARY

# Per megawatt, a month's fuel-cell premium is 2–4% of a month's revenue.

What one megawatt-month is worth, in US$ thousand (NRG calculation; assumptions on the cost-of-power page)




Source: Cleanview (2026); JLL (2026); US EIA; US tax law; NRG calculation

Data centers used about 485 TWh of electricity in 2025, and the IEA expects about 950 TWh by 2030. Connecting a large new load to the US grid now takes 3–6 years, three times as long as in 2015, by Rystad Energy's count.

Rystad expects about 40% of US data-center capacity in 2030 to run on power made at the site. The usual on-site answer is a gas plant, but the largest heavy-duty turbine maker has about six years of its output committed (NRG calculation). Modular plants, fuel cells among them, reach commercial operation in 18 to 24 months.

On the EIA's 2026 planning assumptions, which may be high, a fuel cell costs four to eight times as much to build as a gas plant, and its power works out at about $135 per MWh, or $103 with the 30% federal tax credit, against $96 for the average US industrial customer (NRG calculation).

That premium, $23k–36k a month per megawatt before the credit, is small beside the $0.8–1.0m a megawatt of AI capacity can earn in a month on Cleanview's estimate (NRG calculation).

On Rystad Energy's figures, US orders run ahead of output: about 9 GW contracted for data centers against about 1.8 GW a year from the factories.

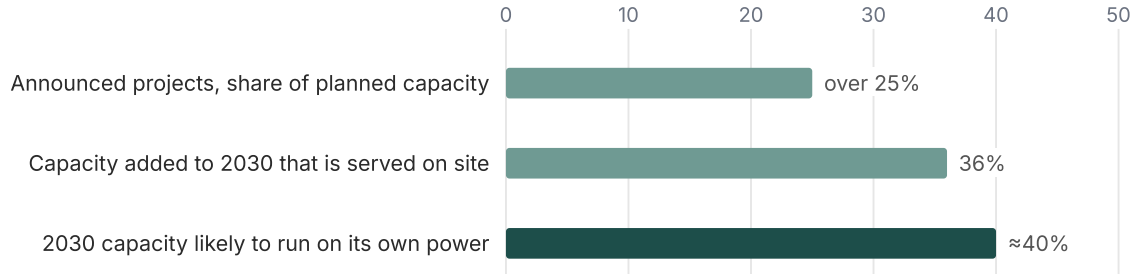
Korea has no buying route sized for data centers yet. Its hydrogen-power auction buys plants of 20 MW or less, offered 930 GWh in 2026 against 1,300 GWh a year before, and has not set volumes from 2027.

01 · OFF THE GRID

# More than a quarter of planned US data-center capacity intends to make its own power.

Three research firms measure it differently, and all three put it between a quarter and two-fifths of the US data-center capacity now being planned: capacity meant to run, at least at first, on power generated at the site.

Share of US data-center capacity planning on-site power; the three firms define the share differently




Source: Cleanview (2026); Enverus via Power Engineering (October 2026); Rystad Energy (2026)

Data centers used about 485 TWh of electricity in 2025, and the IEA expects about 950 TWh by 2030, growth of about 14% a year (NRG calculation). AI-focused sites set the pace: their demand rose 50% in 2025 alone. The IEA's 2025 report found data centers driving nearly half of US electricity demand growth to 2030, and expects them to use more electricity by the end of the decade than all of the country's aluminum, steel, cement and chemicals plants combined.

Much of that new load is not waiting for the grid. Cleanview counted about 90 GW at 59 data centers in its mid-2026 report, with 92% of the projects announced since the start of 2025; its live tracker has since reached 121 GW at 108 plants, from announced to running.

Enverus expects on-site plants to serve 22.5 GW of new data-center load by 2030. Engines, small and medium gas turbines and fuel cells make up 61% of the gas-fired capacity it sees being built, because they come online faster than a large plant. The IEA puts on-site gas supplying data centers worldwide at 15–27 GW by 2030.

JLL finds that speed to power is now the first test in choosing a site. Announcements, though, run far ahead of delivery.

> **2.2%**
>
> Share of announced US on-site data-center capacity that was running in mid-2026. Cleanview expects 2.8–3.2 GW to be running by the end of 2026.

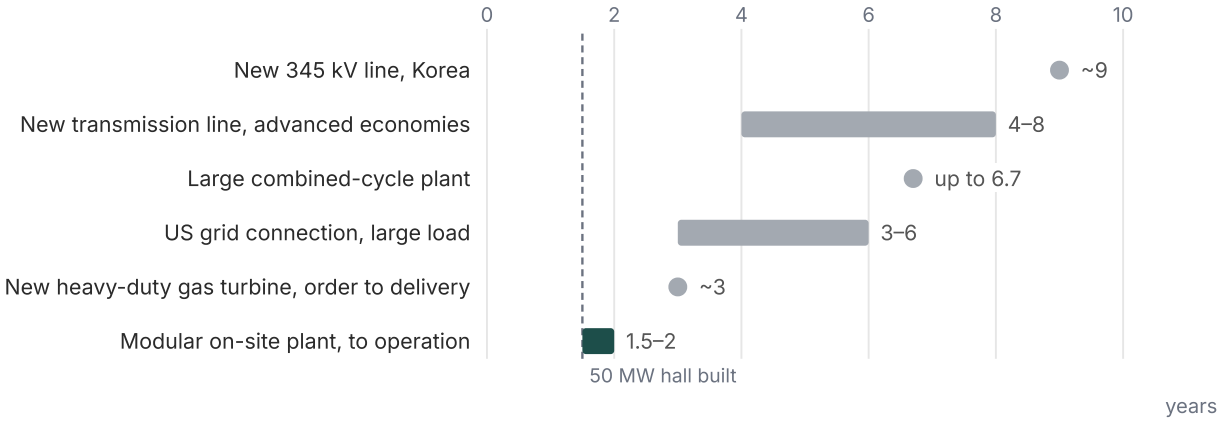
Sources: Cleanview; Enverus; Rystad Energy; IEA; JLL (2025–26); NRG calculation

02 · THE CLOCKS

# A modular on-site plant can run within two years; the grid takes three to six.

Only modular on-site plants, fuel cells among them, come close to the 18 months it takes to build a 50 MW data center; the grid and new gas plants take years longer.

Years from decision to power, by route; the dashed line marks the build time of a typical data hall




Source: IEA (2025); Rystad Energy (2026); Enverus via Power Engineering (2026); JLL (2026); Metro Seoul (2026); company filings and announcements

Rystad Energy finds that connecting a large load to the US grid now takes 3–6 years, about three times as long as in 2015. JLL puts the average wait in the main data-center markets at more than four years, and the IEA estimated in 2025 that grid constraints could delay about 20% of the data-center capacity planned to 2030.

New wires take longer still: four to eight years in advanced economies, by the IEA's count, and about nine in Korea, where a 345 kV line spends roughly five years in siting and permits before four years of construction.

A gas plant on new heavy-duty turbines is the usual on-site answer, but those turbines take about three years from order to delivery, and Enverus puts a large combined-cycle plant at up to 80 months. Engines, smaller turbines and fuel cells reach commercial operation in 18 to 24 months.

JLL finds developers already pre-ordering some materials up to 24 months ahead to keep builds on schedule. Power is harder to pre-order. Cleanview argues that bringing a data center online even a few years early can be worth tens of billions in revenue.

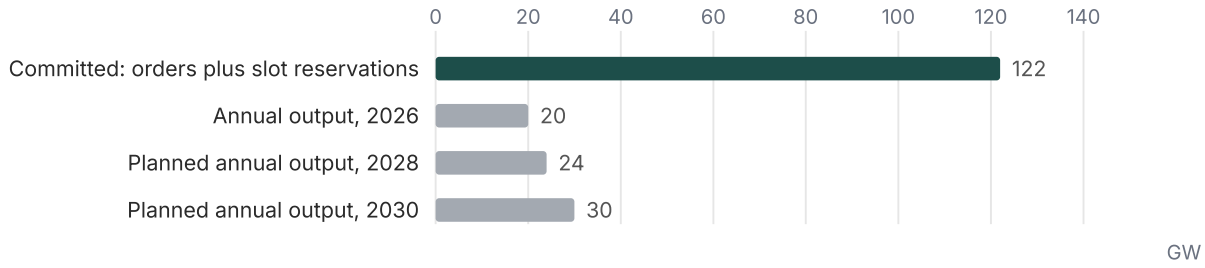
> **1–4.5 years**
> Time a modular plant started now would carry a site before the grid arrives: 18 to 24 months to build against a 3–6-year grid wait (NRG calculation).

03 · THE TURBINE QUEUE

# The largest heavy-duty gas-turbine maker has about six years of output committed.

Orders and slot reservations at the largest maker reached 122 GW at the end of September 2026, against factory output of 20 GW a year. It plans to reach 30 GW a year by 2030 (company filings).

A large US gas-turbine maker: commitments against output, GW




Source: company filings and announcements

At today's rate, 122 GW is about six years of production, and still about five years at the 24 GW a year planned for 2028 (NRG calculation).

A slot reservation holds a place in the factory schedule before a firm order is signed. In the third quarter the maker turned 13 GW of reservations into orders, signed 8 GW of new ones and shipped 5 GW of equipment; at the end of September, 58 GW of its 122 GW were still reservations. That is the queue a data center joins when it plans a gas plant of its own.

The maker expects at least 130 GW of commitments by the end of 2026, and a new heavy-duty order now takes about three years to deliver. About a fifth of the volume under contract is tied explicitly to data-center load, and the IEA counted a 70% rise in 2025 in gas-turbine orders meant for data centers.

The maker's chief executive argues that over a three-year project the turbine is often not what sets the date; the rest of the plant is. Lazard's 2026 study adds that turbine supply is constrained and has stretched development timelines well beyond historical norms.

Other markers of the turbine queue

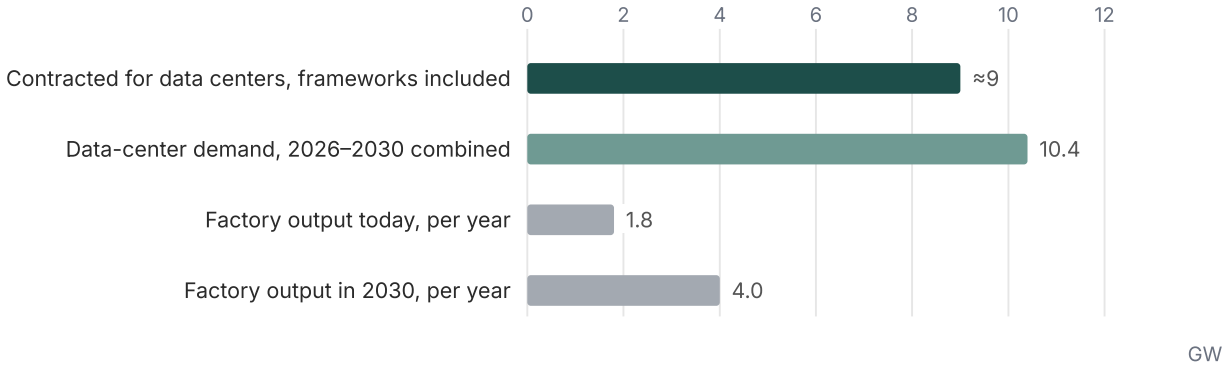
| Marker | Reading | Source |
|---|---|---|
| Largest maker's slots left for 2029–30 | About 10 GW | Power Engineering, Apr 2026 |
| Combined-cycle cost in Lazard's 2026 study | $1,450–2,100 per kW | Lazard, Jul 2026 |
| Combined-cycle quotes, plants due after 2028 | $2,400–2,600 per kW | Lazard, Jul 2026 |

Sources: Company filings; Power Engineering; Lazard; IEA (2026); NRG calculation

# Fuel-cell orders for data centers equal about five years of today's factory output.

Rystad Energy counts about 9 GW of fuel cells contracted for data centers, framework agreements included. The industry's factories turn out about 1.8 GW a year and are on course for about 4 GW a year by 2030.

Fuel cells, GW; the first two bars are totals, the last two are one year of output




Source: Rystad Energy (2026)

Framework agreements set ceilings rather than firm orders, as Reuters notes, so not all of the 9 GW may be built. Delivering it would still take about five years of today's output (NRG calculation).

Rystad expects 10.4 GW of data-center demand between 2026 and 2030 and puts data-center fuel-cell revenue at about $30bn in 2030, against about $2.8bn in 2025. Solid oxide cells make up about 53% of stationary fuel-cell deliveries to date, and Rystad expects their system costs to fall 20–25% by 2030.

A US maker of carbonate fuel cells, a different chemistry from solid oxide, expects data centers and related work to grow from 25–30% of its business to 75–85% within two to three years.

Rystad's revenue path implies a market about ten times its 2025 size within five years (NRG calculation). Its demand estimate for 2026–2030, 10.4 GW, is already larger than today's 9 GW order book.

Rystad expects North America to account for about 91% of installed on-site generating capacity worldwide, which makes the order book largely a US story.

> **2.25 years**
> Years of factory output the same 9 GW would take at the 4 GW a year expected by 2030 (NRG calculation from Rystad Energy figures).

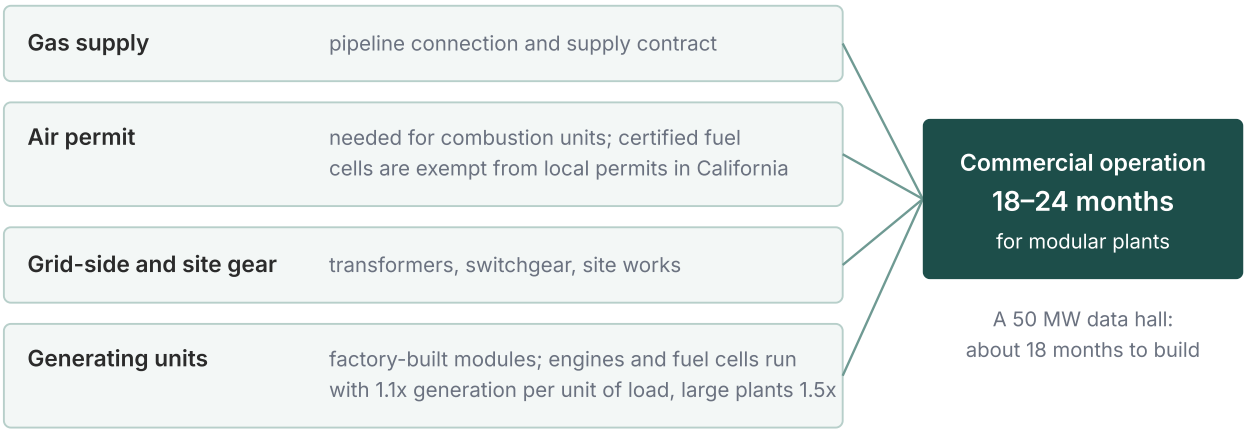
Sources: Rystad Energy (2026); Reuters (October 2026); NRG calculation

05 · THE MODULAR ROUTE

# On-site projects wait on gas, permits and switchgear as much as on generators.

A modular plant reaches commercial operation in 18 to 24 months. The generating units are one of four tracks that have to finish together, and the slowest track sets the date.

What has to finish before an on-site plant can run




Source: Enverus via Power Engineering (2026); Reuters (2026); California Air Resources Board; JLL (2026)

Reuters, reporting on the fuel-cell market in October 2026, notes that projects still need gas connections, permits, transformers and switchgear, and that any of them can hold up deployment. The turbine maker's chief executive says much the same about gas plants.

On permits, fuel cells avoid combustion in the stack, so local emissions are lower, Reuters notes. California's Air Resources Board certifies small generators that meet a NOx limit of 0.07 lb per MWh, and certified units are exempt from local air-district permits, which takes one of the four tracks off the list in that state.

Modular units also need less spare capacity. Enverus finds that engines and fuel cells can run with generation of as little as 1.1 times the load they serve, against about 1.5 times for large-frame plants, or about a quarter less generation for each megawatt served (NRG calculation).

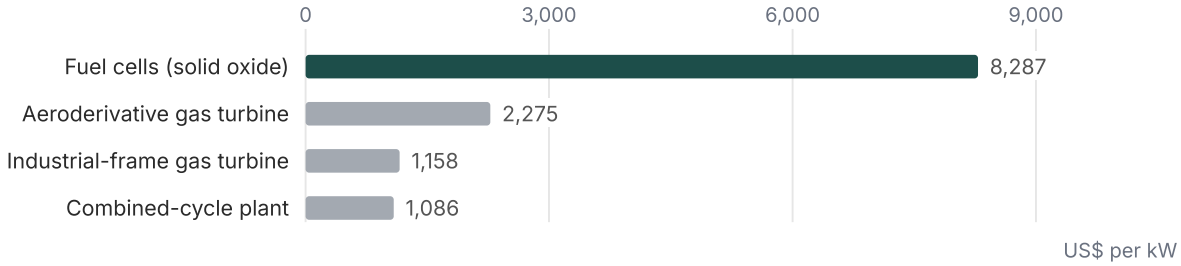
Gas supply is the track a buyer controls least. A site without a pipeline connection waits for one whatever it plans to burn or convert, which is why the quickest projects are those where gas, permits and grid-side gear were lined up before the units were ordered. Permit rules differ by state, so the California route is an example rather than the norm.

06 · THE PRICE OF SPEED

# On EIA planning numbers, fuel cells cost four to eight times more than gas plants.

The EIA's 2026 planning assumptions put a solid oxide fuel-cell plant at $8,287 per kW to build, against $1,086–2,275 for gas plants. Part of the gap is the price of a smaller unit, and part is an allowance for early units.

Total overnight cost, US$ per kW in constant dollars of 2025; EIA planning assumptions for the Annual Energy Outlook 2026




Source: US EIA, Assumptions to AEO2026 (April 2026)

The multiple runs from about 3.6 times an aeroderivative turbine to about 7.6 times a combined-cycle plant (NRG calculation); against today's combined-cycle quotes it is nearer 3.2–3.5 times. On fuel, the fuel cell does better: its heat rate implies about 53% electrical efficiency, close to the best combined-cycle plant and well above the 36–37% of simple-cycle turbines.

At $3.48 gas and running 90% of the time, fuel plus fixed upkeep comes to about $27 per MWh for the fuel cell, against $33–34 for simple-cycle turbines and $24 for combined cycle, a saving of about $5–7 per MWh over a simple-cycle plant (NRG calculation).

The EIA number is a planning assumption for a small plant, not a market price, and it may be high. DOE's 2024 program plan put fuel-cell system costs at $1,200–2,500 per kW in 2023, on a different basis, with a 2030 target of $1,000 per kW, and Rystad expects solid oxide system costs to fall 20–25% by 2030.

Size is the other difference. The fuel cell in the EIA's table is a fraction of a gas plant's size, which is what lets it be added in steps beside a data hall.

The same EIA assumptions: size and running costs

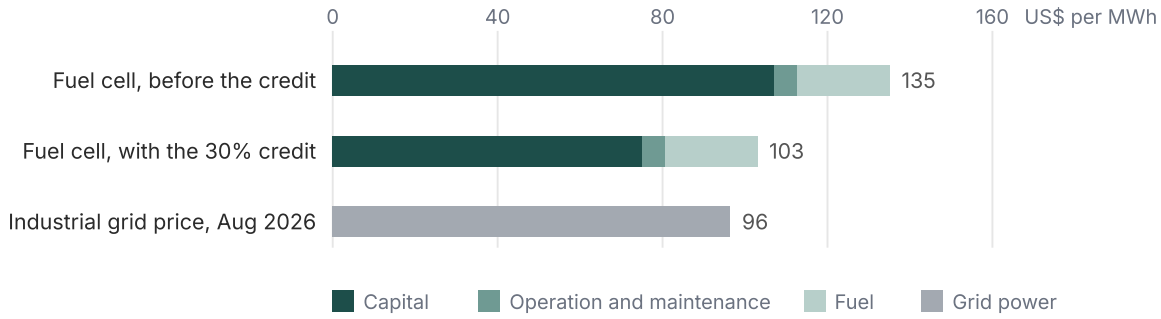
| Plant | Size modelled | Heat rate, Btu per kWh | Fixed O&M, $ per kW-year |
|---|---|---|---|
| Fuel cells | 10 MW | 6,469 | 37.77 |
| Combined cycle | 627 MW | 6,226 | 16.23 |
| Industrial-frame turbine | 419 MW | 9,142 | 7.18 |
| Aeroderivative turbine | 211 MW | 9,447 | 9.99 |

Sources: US EIA (AEO2026 assumptions, April 2026); US DOE; Rystad Energy (2026); NRG calculation

# Fuel-cell power costs about $135 per MWh, or $103 with the federal tax credit.

On the EIA's 2026 planning assumptions, which may be high, capital is about four-fifths of that cost. The average US industrial customer paid $96 per MWh in August 2026 (NRG calculation).

Cost of power, US$ per MWh (NRG calculation; assumptions in the text)




Source: US EIA (AEO2026; retail prices; STEO); US tax law; NRG calculation

The calculation spreads the EIA's build cost over 20 years at 8% a year, assumes the plant runs 90% of the time and buys gas at $3.48 per MMBtu, the EIA's 2026 forecast for Henry Hub. At gas prices of $3–6, power costs $132–151 per MWh, or $100–119 with the credit; US industrial gas averaged about $4.19 in August.

Grid prices vary by state. Industrial customers paid 7.21 cents per kWh in Texas that month and 13.05 in Georgia. The operation and maintenance slice uses the EIA's own upkeep figures and adds nothing for stack changes, which a long-term owner also pays for.

The credit is 30% of the cost of fuel-cell property whose construction starts from 2026, at the full rate through 2033, then 75% in 2034 and 50% in 2035. Gas-fed plants qualify; plants built with material from prohibited foreign entities do not.

On Cleanview's revenue estimate and the EIA and JLL cost figures, the premium is small: $23k–36k a month before the credit, against $0.8–1.0m of revenue and $75k–242k a month for the capital tied up in the building (NRG calculation). With the credit, the premium falls under 2% of that revenue.

> **2–4%**
>
> A month's fuel-cell premium per MW, before the tax credit, as a share of what a MW of AI capacity can earn in a month (NRG calculation).

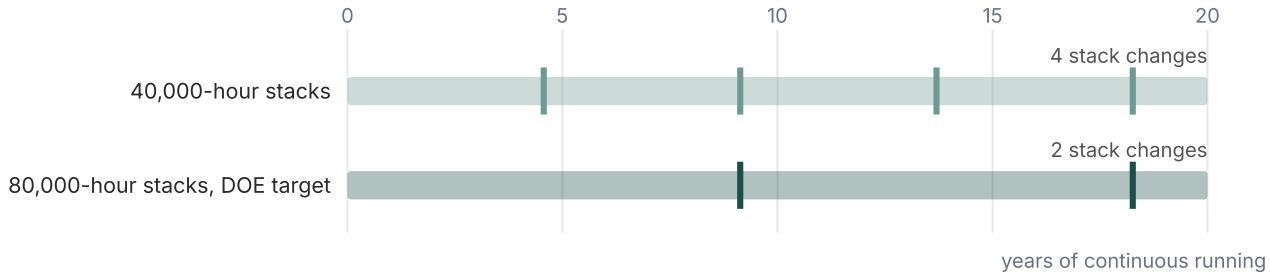
Sources: US EIA (2026); US tax law via Norton Rose Fulbright; Cleanview; JLL (2026); NRG calculation

08 · STACK LIFE

# On DOE's figures, a stack lasts about five to nine years of continuous running.

The stack is the part of a fuel cell that wears out. DOE measures its life as the hours of running until net power has fallen by more than 10%, and sets targets for how long that should take.

Stack changes over a 20-year plant life, running without pause (NRG calculation from DOE figures)




Source: US DOE, Hydrogen and Fuel Cell Technologies Office program plan (2024); NRG calculation

For distributed stationary systems, DOE's 2024 program plan puts durability at 40,000–80,000 hours in 2023, with a target of 80,000 by 2030. Running without pause, that is 4.6 to 9.1 years (NRG calculation). Over a 20-year plant life, a site would change its stacks two to four times.

The same plan puts electrical efficiency at 40–60% against a 2030 target of 65%; DOE's older table put availability at 95% in 2015, with 99% as the target. These are DOE figures for the class, not records of any fleet; the plant life is our assumption, as in the cost calculation.

Availability is the figure a data center feels, and one reason sites carry spare generation. Output also drifts down as a stack ages; DOE counts a stack as spent once it has lost more than 10% of its power.

DOE's ultimate target is 130,000 hours, about 15 years without pause, which would leave a 20-year plant life with one change (NRG calculation). The 2030 target alone would halve the changes on the lower 2023 figure.

> **88 h vs 438 h**
>
> Hours a year a unit is down at DOE's 99% availability target and at its 2015 level of 95% (NRG calculation).

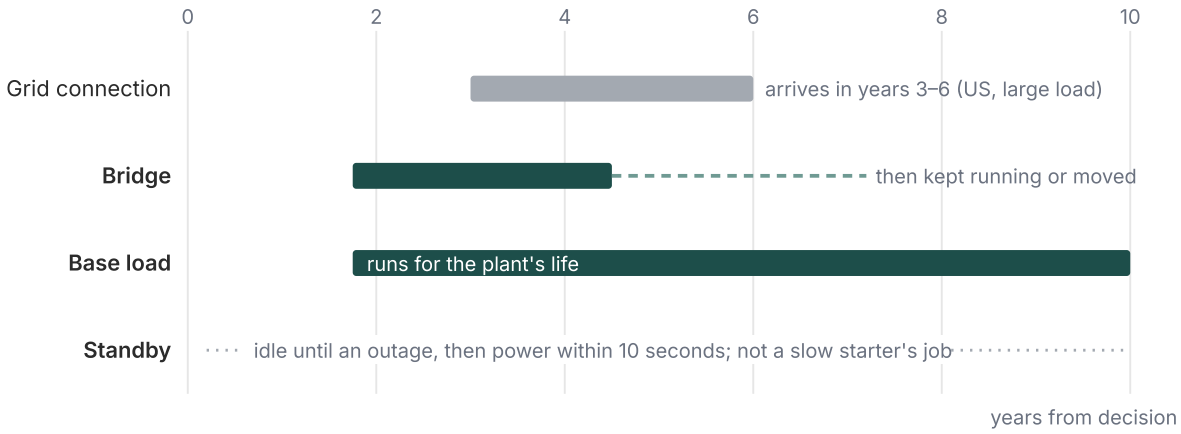
Sources: US DOE (2024 program plan; stationary fuel-cell targets; fuel-cell types); NRG calculation

09 · BRIDGE OR BASE LOAD

# Fuel cells are built to run without pause, as a bridge or as base load.

Solid oxide cells start slowly, so on a data-center site they run continuously: as a bridge until the grid connection arrives, or as base load after it.

How a fuel cell is used on a data-center site, in years from the decision




Source: US DOE; IEA (2025); NFPA 110 (2025 edition); JLL (2026); Rystad Energy (2026); Enverus via Power Engineering (2026)

DOE notes that solid oxide cells run at up to 1,000°C, which makes them efficient but slow to start and in need of heavy thermal shielding. A standby generator has the opposite job. NFPA 110, now in its 2025 edition, classes systems that restore power within 10 seconds as Type 10, and a unit that starts slowly is not built for that.

That leaves two roles. As a bridge, fuel cells carry a site from their own start, 18 to 24 months after the decision, until a grid connection arrives three to six years out. As base load they keep running after the grid comes. Data centers already install backup generators for grid outages, the IEA notes; fuel cells are added for a different job.

JLL sees the same split for on-site gas in the United States: bridge power first, and increasingly permanent supply.

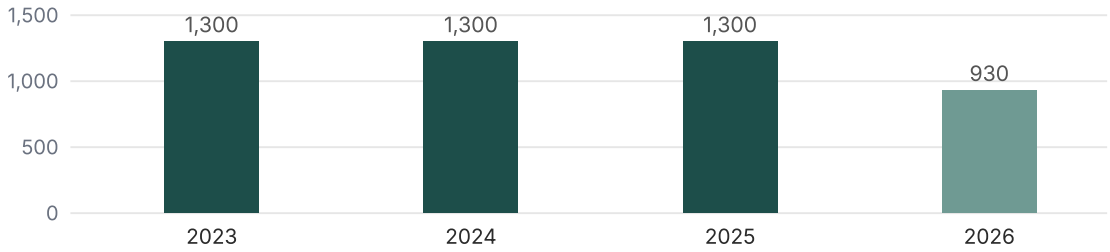
Running matters to the economics as well. The cost-of-power page assumes the plant runs 90% of the time; a unit idle for long stretches spreads the same capital over fewer megawatt-hours. If grid connections arrive faster than expected, bridge plants stay but fewer new ones follow, which is the low path in the outlook.

A bridge of one to four and a half years is about 8,000–35,000 hours at 90% running, inside one 40,000-hour stack life on DOE's lower figure; base load over 20 years needs two to four changes (NRG calculation).

# Korea's hydrogen-power auction buys small plants, and its 2026 round is smaller.

Korea buys new fuel-cell power through a national auction for hydrogen power, run by the government with the power exchange. It offered 1,300 GWh a year in 2023–2025 and only 930 GWh in 2026.

General-hydrogen auction volume offered, GWh a year




Source: Asia Economy (May 2026); Kyungbuk Maeil (June 2026)

At the auction's own conversion, 1,300 GWh a year is about 200 MW of plant, the whole national volume, shared among many small plants. The 2026 round also offers 500 GWh in the separate clean-hydrogen market, but the general-hydrogen volume is about 72% of its earlier level. Volumes from 2027 wait for the 12th Basic Plan, and the environmental test for general hydrogen has been tightened.

In May, before the 2026 volume was set, Asia Economy reported that the government was preparing a sharp cut to the general-hydrogen volume, the part of the auction in which fuel cells compete.

Bidders are not scarce: the 2025 round drew far more bids than it awarded. Since it opened in 2023, the general-hydrogen market has mainly served fuel cells and other distributed generation. The ministry describes it as built for distributed plants, and winners start up about two years after the award.

Asia Economy also notes that fuel cells abroad are drawing attention as a power source for AI data centers. Nothing in the auction is shaped for that buyer. A single data hall in JLL's reference case needs 50 MW on one site; the auction buys small plants spread across many.

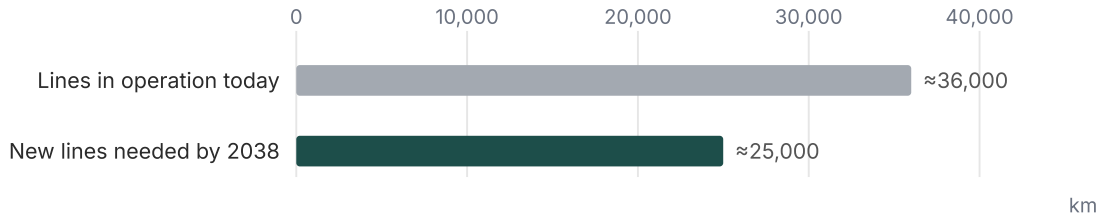
> **≈143 MW**
>
> The whole 2026 general-hydrogen volume in plant terms, at the auction's own conversion of 1,300 GWh to about 200 MW: under three 50 MW data halls (NRG calculation).

Sources: Korea Power Exchange and trade ministry (2025); Asia Economy; Kyungbuk Maeil (2026); JLL (2026); NRG calculation

# Korea needs about 25,000 km of new transmission lines by 2038, 70% of today's network.

Korea's national utility plans about 25,000 km of new lines by 2038 under its long-term transmission plan, against about 36,000 km in operation today. Data-center requests are part of the load that plan has to carry.

Korea: transmission lines in operation and to be added by 2038, km




Source: Metro Seoul (October 2026), citing the national utility

Data-center applications for grid-impact review total about 78.7 GW, about 44 GW of it around Seoul, though the utility counts duplicates among them; requests for specific supply from AI data centers come to about 8.4 GW. A 345 kV overhead line needs about five years for siting, permits and design and four for construction. The same report notes calls for a grid code that data-center operators would have to meet, because AI loads swing sharply.

The government's answer is to move demand rather than wait for wires. Seven distributed-energy zones were designated in 2025, and the energy ministry plans to ease rules so that power-hungry sites such as data centers can locate outside the capital region.

The routes those zones open are still small. Distributed-energy suppliers must cover 70% of their customers' demand from their own plants, and the hydrogen-power auction buys plants of 20 MW or less.

None of these rules mentions fuel cells, and none yet offers a buyer the size of a data center a contract of its own. Until the zone rules widen, a Korean developer has the grid queue and an auction for small plants.

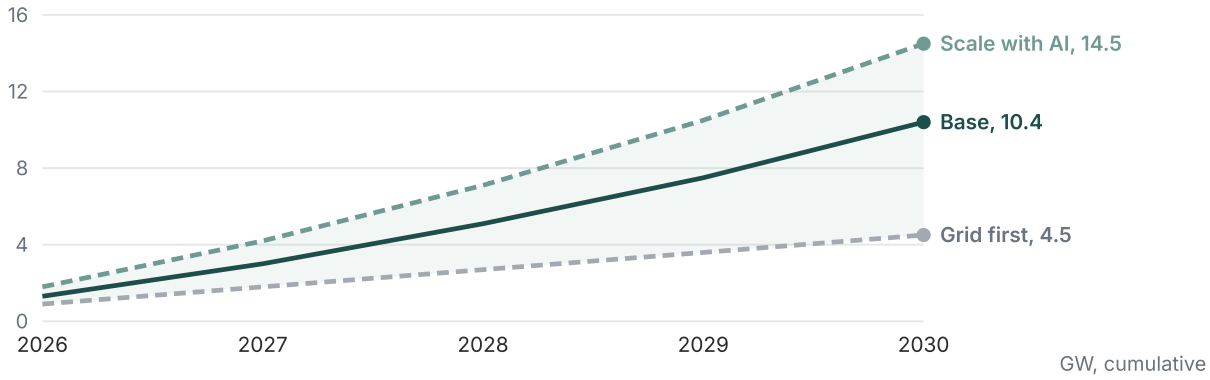
> **35 MW**
>
> Capacity cap on a Korean district electricity supplier, now under review so that large data centers can be served inside distributed-energy zones.

Sources: Metro Seoul; Dailian (2026); trade ministry (2025)

# Across three paths, data centers add roughly 5–15 GW of fuel cells by 2030.

Published forecasts for the whole solid oxide market in 2030, $9.6bn and $11.6bn, sit far below Rystad's $30bn for data-center fuel cells alone. The paths below are illustrative NRG calculations from Rystad's figures, not forecasts.

Fuel cells installed at data centers from 2026, cumulative GW; illustrative paths (NRG calculation)




Source: Rystad Energy (2026); NRG calculation

| | | |
|---|---|---|
| **SCALE WITH AI DATA CENTERS** | 15 GW by 2030 | Factory output climbs to about 4 GW a year by 2030 and data centers take all of it. |
| **BASE** | 10 GW by 2030 | Data centers take about 70% of output, in line with Rystad's 10.4 GW of demand for 2026–2030. |
| **GRID FIRST** | 5 GW by 2030 | About half of today's 9 GW of frameworks is built, as grid and turbine capacity arrive sooner. |

## SIGNPOSTS

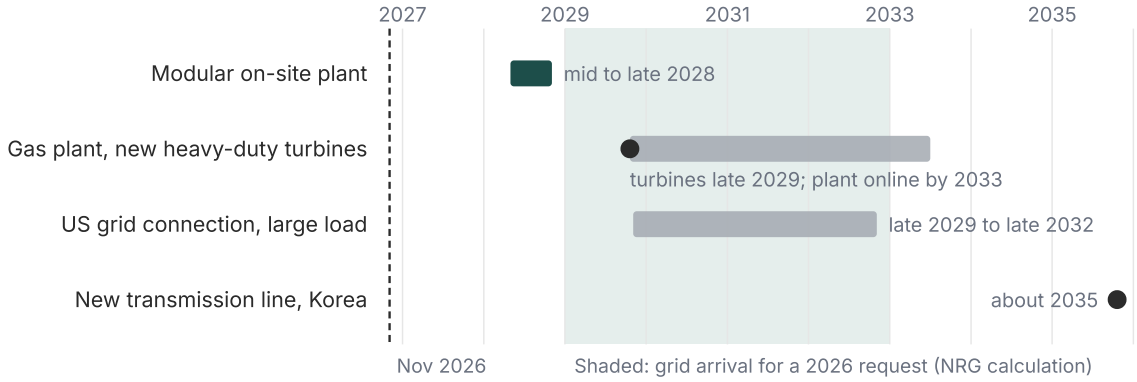
- Framework volumes turning into firm, installed capacity in trackers and company filings
- DOE's next status update on stationary fuel-cell durability
- Factory output against the 9 GW order book, about 1.8 GW a year today
- US grid waits for large loads, now 3–6 years

Sources: Rystad Energy (2026); BCC Research (2026); MarketsandMarkets (2025); NRG calculation

# A decision made today: on-site power by 2028, grid power from late 2029.

The chart applies today's lead times to a decision made in November 2026 (NRG calculation). Only the modular route lands well before the end of the decade.

When power arrives for a decision made in November 2026; the shaded band is the grid-arrival window (NRG calculation)




Source: Enverus via Power Engineering (2026); Rystad Energy (2026); company filings and announcements; Metro Seoul (2026); NRG calculation

| | | |
|---|---|---|
| **ON-SITE MODULAR** | online 2028 | Engines, small turbines and fuel cells take 18 to 24 months; fuel cells keep the full 30% federal tax credit if construction starts by 2033. |
| **NEW GAS PLANT** | 2030–2033 | Turbines ordered now arrive about three years out. With no new orders, the largest maker's expected end-2026 book of 130 GW would last to about 2031 at its planned output (NRG calculation). |
| **GRID CONNECTION** | 2029–2032 | A large load waits 3–6 years, so a request made in 2026 is connected in about 2029–2032 (NRG calculation). |

## SIGNPOSTS

- Turbine output against commitments: 20 GW a year now, 24 GW a year in 2028
- The 30% federal tax credit, at full rate for construction starting by 2033
- Share of announced on-site capacity actually running, 2.2% in mid-2026
- Korea's auction volumes from 2027 and its review of the 35 MW supply cap

Sources: Enverus; Rystad Energy; company filings; Cleanview; Metro Seoul (2026); US tax law; NRG calculation

METHOD

# How this report was built.

Figures with a cited source are public. They come from an international agency (the IEA); US government sources (the Energy Information Administration and the Department of Energy) and a state regulator (the California Air Resources Board); an industry standard (NFPA 110); market researchers and trackers (Rystad Energy, Enverus, Cleanview, JLL, Lazard, BCC Research and MarketsandMarkets); news and trade press (Reuters, Power Engineering and Eco-Business); a law firm's summary of US tax law; Korean government releases and press (the Ministry of Trade, Industry and Energy with the Korea Power Exchange, Metro Seoul, Asia Economy, Kyungbuk Maeil and Dailian); and company filings and announcements. Each figure is the newest release we could find on the data-as-of date; older series carry their year.

An NRG estimate is a figure from Nathan Research Group's own research, rounded into a deliberately wide range and published only where the newest public data point the same way. This report carries no NRG estimate; every figure in it is public or an NRG calculation.

An NRG calculation is a figure we derived from public numbers alone: growth rates, ratios, unit conversions, a simplified cost of power (8% a year over 20 years, with the plant running 90% of the time), stack changes over a plant's life, landing dates for a decision made now (including the 2029–2032 grid-arrival window, 2026 plus Rystad Energy's 3–6-year grid wait, and the bridge an on-site plant covers before it), and three illustrative paths built from Rystad Energy's figures. Its inputs are the sources named under each chart.

Where the text explains how the industry works, it is NRG's analysis of the public evidence cited, written as general practice rather than about any one company. Companies are described rather than named.

This is business and market research, not investment advice.

WORKING WITH NATHAN RESEARCH GROUP

# Partner With Nathan Research Group

Filings show how fast order books have grown and auction results show how much Korea buys, but neither shows how a data center actually chooses, builds, permits and runs its on-site power. That knowledge sits with the people who design, buy, permit and operate these systems. Reaching them, compliantly, is what we do.

## WHO WE PUT IN THE ROOM

| | |
|---|---|
| **Data-center power and energy leads** | Owner and developer teams who choose between grid, turbines and fuel cells for new AI data centers. |
| **Utility and interconnection specialists** | Large-load connection queues in the US and Korea's grid-impact review for new data-center demand. |
| **On-site generation engineers** | Design, operation and maintenance of fuel cells, engines and turbines on data-center sites. |
| **Equipment supply specialists** | Lead times and delivery for turbines, fuel cells, transformers and switchgear. |
| **Gas supply and permitting specialists** | Pipeline capacity, air permits and local siting rules for on-site generation. |
| **Energy policy and market specialists** | Korea's hydrogen-power auctions and power-market rules, and US state policy on large new loads. |

If your team is evaluating solid oxide fuel cells, the on-site power market for AI data centers, or the broader fuel-cell and distributed-power sector, tell us the decision you're trying to make.

## START THE CONVERSATION


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Based on public sources and NRG's own research. Figures marked NRG estimate are rounded ranges checked against public data. Nathan Research Group does not request or facilitate material non-public information, and runs every engagement through a documented compliance protocol.